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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,922	06/25/2001	Praveen Gupta	4740-004	9724

24112 7590 11/18/2005

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EXAMINER	
MEHRA, INDER P	

ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 11/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/888,922	GUPTA ET AL.	
	Examiner	Art Unit	
	Inder P. Mehra	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,21,22,26,27,34,35 and 42* is/are rejected.

7)☒ Claim(s) *2-20,23-25,28-33,36-41 and 43-48* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in reference to the response dated: 10/25/05. Claims 1-48 are pending.

2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 26-27, 34 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wallentin et al** (US Patent No. 6,347,091), hereinafter, Wallentin, in view of **Srinivasan et al** (US Patent No. 6,304,549), hereinafter, Srinivasan.

For claims 1, 26-27, 34 and 42, Wallentin discloses , "a method of managing a radio channel assigned to a mobile terminal in a radio access network that supports a plurality of radio channel data rate capacities, (refer to abstract, col. 2 lines 10-15, col. 3 lines 25-35, col. 5 lines 50-55,, col. 12 lines 15-17, and col. 15 lines 20-23; the method comprising:

Wallentin discloses "monitoring usage of the radio channel over an interval of time" (refer to "the transmit queue is empty), a predefined time period is monitored.", refer to col. 10 lines 5-7;

Wallentin does not disclose the following limitations, explicitly, which are disclosed by

Srinivasan., as follows:

- monitoring usage of the radio channel over an interval of time (means for monitoring service usage of said virtual path connection (channel) includes monitoring on demand service requests at each said switch for a predetermined window of time, refer to col. 18 lines 27-31);
- increasing a data rate capacity of the radio channel if the usage remains above a maximum usage threshold for a first qualified period of time (increase bandwidth allocation of said switch along said route when said virtual path connection usage at said switch increases above said second predetermined threshold, refer to col. 18 lines 40-45) ; and
- decreasing the data rate capacity of the radio channel if the usage remains below a minimum usage threshold for a second qualified period of time (decrease bandwidth allocation of said switch when said virtual path connection usage at said switch falls below said first predetermined threshold , refer to col. 18 lines 35-41).

Thus it would have been obvious to the person of ordinary skill in the art at the time of invention to use the cap[ability increasing or decreasing a data rate capacity of the radio channel if the usage remains above a maximum usage threshold as taught by Srinivasan. This capability can be implemented by incorporating in the switch as taught by Srinivasan. The motivation to do so being that it provides an efficient method for handling state changes and computing optimum route.

5. Claims , 21-22 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallentin, in view of **Srinivasan**, as applied to claims 1, 26-27, 34 and 42 above, and further in view of **Chin** (US Patent No. 6,690,938).

For claims 21-22 and 35, Wallentin, in view of Srinivasan'549 discloses all the limitations of subject matter, as above, with the exception of the following limitation, which is disclosed by Chin, as follows:

- "de-allocating the radio channel if the usage is below the minimum usage threshold and a current data rate capacity of the radio channel is at a minimum data rate capacity as defined for the radio access network,**as recited by claim 21 and 35,** (refer to "If the number of remaining traffic channels not currently in use drops below the traffic channel threshold, in-use supplementary channels are de-allocated and reallocated as traffic channels, refer to col. 5 lines 64-67).
- wherein the radio access network is an IS-2000 based network and the radio channel is a supplemental channel, and further comprising: before initial allocation of the supplemental channel to the mobile terminal, determining whether a fundamental channel that is allocated to the mobile terminal has a sufficient data rate capacity', and allocating the supplemental channel to the mobile terminal if the data rate capacity of the fundamental channel is not sufficient, **as recited by claim 22,** (refer to "If available traffic resources drop below the threshold, control is passed to a resource allocation step 96, where a request is initiated from the target BTS CRM 44 to the BSC SBS 54 requesting", that the BSC SBS 54 issue a supplemental channel release request to the target, col. 12 lines 5-10.

Thus it would have been obvious to the person of ordinary skill in the art at the time of invention to "If the number of remaining traffic channels not currently in use drops below the traffic channel threshold, in-use supplementary channels are de-allocated and reallocated as traffic channels", as taught by Chin. This capability can be implemented by incorporating S/W to de-allocate channels, as taught by Chin into Srinivasan'switch. The motivation to do so being that it provides an efficient method for allocating and de-allocating traffic channels and supplementary channels.

Allowable Subject Matter

6. Claims 2-20, 23-25, 28-33, 36-41 and 43-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments filed 10/25/05 have been fully considered but they are not persuasive.

Applicant argues, "Srinivasan exclusively addresses itself to ATM networks. Thus, the word "channel" in Srinivasan has a meaning radically different than the word "channel" in the instant application or in Chin.For example, the background of Srinivasan states that "Virtual Channel Connections(VCCs)" are "connections of virtual channel links (segments of unidirectional transport of ATM cells between a point where a virtual channel identifier (VCl) is assigned to the point where this value is translated or removed), and Virtual Path Connections

(VPCS)which are a concatenation of virtual path links, which are terminated by points where the virtual path identifier (VPI) is assigned and translated or removed."

In response, it is stated that Wallentin discloses , "a method of managing a radio channel assigned to a mobile terminal in a radio access network that supports a plurality of radio channel data rate capacities, (refer to abstract, col. 2 lines 10-15, col. 3 lines 25-35, col. 5 lines 50-55,, col. 12 lines 15-17, and col. 15 lines 20-23; the method comprising:

Wallentin discloses "monitoring usage of the radio channel over an interval of time" (refer to "the transmit queue is empty), a predefined time period is monitored.", refer to col. 10 lines 5-7;

Applicant argues "All such anticipation rejections fail as a matter of law because Srinivasan does not disclose (explicitly or inherently) the claimed methods and apparatus of managing a radio channel. Srinivasan exclusively discloses dynamic management of Asynchronous Mode Transfer (ATM) channels-note that Srinivasan does state that it can manage ATM channels between radio base stations, but, by definition, those are backhaul ATM-based network links and not air interface radio channels within the meaning of Applicant's claims.

In response, it is stated that Wallentin and Srinivasan discloses all the limitations of independent claims 1, 27, 34 and 42, refer to paragraph 3 above of instant office action, including the limitations: "A method of managing a radio channel assigned to a mobile terminal in a radio access network that supports a plurality of radio channel data rate capacities", as recited in preamble of claims 1, 27,34, and 42. "air interface radio channel" is not recited in the claim. In fact "radio channel" is "radio communication by means of radio waves (in air). Further,

RF system of communication employing electromagnetic waves propagated through space.

Srinivasan discloses "use in----- wireless ATM networks where provisioned VPCs between adjacent base stations allows simplified mobile handoffs", refer to col. 1 lines 50-56,

Applicant argues "Chin does not teach or suggest monitoring a radio channel for usage and dropping that channel if the usage is below a minimum capacity defined by the system, and no one skilled in the art would thus find any motivation for combining Chin with Srinivasan in the manner suggested by the examiner.

In response, it is stated that Srinivasan discloses explicitly "means for monitoring service usage of said virtual path connection (channel) includes monitoring on demand service requests at each said switch for a predetermined window of time, refer to col. 18 lines 27-31). Further, Chin discloses clearly "If the number of remaining traffic channels not currently in use drops below the traffic channel threshold, in-use supplementary channels are de-allocated and reallocated as traffic channels, refer to col. 5 lines 64-67.

Applicant argue "As explained in Section 2142 of the MPEP, the examiner bears the initial burden of making out a prima facie case of obviousness under 35 U.S.C. 1 103".

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Srinivasan and Chin combined disclose "monitoring a radio channel for usage and

dropping that channel if the usage is below a minimum capacity defined by the system", as explained above.

In light of above explanation, the arguments by applicant are not persuasive.

Comments

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Inder P. Mehra whose telephone number is 571-272-3170. The examiner can normally be reached on Monday through Friday from 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Inder Pal Mehra

Inder P Mehra
Examiner
Art Unit 2666

11/16/05

DANG TON
PRIMARY EXAMINER